**In the claims:**

1. (currently amended) A system comprising:

an electromyogram (EMG) system operative to sense electromyographic activity generated in a muscle;

at least one position sensor; and

a processor in communication with said EMG system and said at least one position sensor, said processor operative to process ~~data~~ electrical muscular activity signals of said EMG system and three-dimensional positions ~~and orientation information~~ of said electrical muscular activity signals from said at least one position sensor to provide an output and display ~~that comprises~~ of said electrical muscular activity signals and their three-dimensional positions at the same time ~~electromyographic activity data as a function of the three-dimensional position and orientation of said at least one position sensor~~.

2. (original) The system according to claim 1, wherein said EMG system comprises at least one EMG sensor adapted to sense electromyographic activity generated in a muscle of interest and at least one reference EMG sensor adapted to sense electromyographic activity generated in a reference muscle.

3. (original) The system according to claim 1, further comprising a monitor coupled to said processor and adapted to display processed information from said processor.

4. (original) The system according to claim 1, further comprising a position sensing system adapted to measure the three-dimensional position and orientation of said at least one position sensor with respect to a reference position fixed in space.

5. (original) The system according to claim 1, further comprising a cardiotocogram (CTG) monitor in communication with said processor, said CTG monitor comprising a fetal beat-to-beat heart rate (FHR) sensor and a uterine labor activity (TOCO) sensor.

6. (previously amended) The system according to claim 5, wherein said processor is operative to process data from said CTG monitor in addition to the data of said EMG system and the three-dimensional position information from said at least one position sensor to provide an output that comprises electromyographic activity data and CTG data as a function of the three-dimensional position of said at least one position sensor.

7. (original) The system according to claim 1, further comprising a warning device in communication with said processor, operative to issue a warning if processed data processed by said processor is above a predefined limit.